

**REMARKS**

The drawings and specification have been corrected to overcome the examiner's objections.

Claims 2, 6 and 17 have been converted from dependent form into independent form. This change in form does not narrow or limit claims 2, 6 and 17. Claim 2 has also been amended to delete "which" as requested by the examiner. Claim 6 has been amended to overcome the rejection based upon 35 U.S.C. 112, second paragraph. These changes have not narrowed or limited the claimed invention. In view of page 4 of the office action, these claims should now be in condition for allowance.

Claims 1 and 5 stand rejected under 35 U.S.C. §102(b) as being anticipated by Fluegel (US 5,702,073). Claim 4 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Fluegel (US 5,702,073). Claims 11, 12, 16 and 18 stand rejected under 35 U.S.C. §102(b) as being anticipated by Houf et al. (US 4,769,557). Claims 14, 15 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Houf et al. (US 4,769,557). Claims 20, 21, 23, 25 and 26 stand rejected under 35 U.S.C. §102(b) as being anticipated by Connolly et al. (US 5,184,141). The examiner is requested to reconsider these rejection.

Claim 1 has not been amended above. Claim 1 claims that the first section is adapted to be attached to an exterior surface of an aircraft to close an access opening through the exterior surface. The examiner has stated that in Fluegel the first section 20 does not close an access opening, but it is "adapted" to do so. It appears that the examiner is not

applying the proper standards for patentability. Nowhere in Fluegel is there a disclosure or suggestion of spreader plate 20 being adapted to be attached to an exterior surface of an aircraft to close an access opening through the exterior surface. The examiner's belief that it could be used for such a purpose only comes after reading applicants' patent application. Fluegel clearly only teaches that the spreader plate 20 is adapted to be located inside the aircraft on an inside surface of the fuselage skin 22 as shown in Figs. 3 and 4.

In claim 1, the claim language "adapted to be attached at an exterior surface of an aircraft to close an access opening through the exterior surface" is a functional limitation which is not disclosed or suggested in Fluegel. The examiner is directed to MPEP §2173.05(g). A function limitation is an attempt to define something by what it does, rather than by what it is. There is nothing inherently wrong with defining some part of an invention in functional terms. A functional limitation **must be evaluated and considered**, just like any other limitation of the claim. Furthermore, Fluegel does not disclose or suggest that the heat exchange tube 14 (second section) extends **outward** from the spreader plate 20 for transferring heat to air passing by **both** the exterior surface and the second section. Fluegel certainly does not "anticipate" the features of claim 1, nor are the features of claim 1 suggested in Fluegel. Therefore, claim 1 is patentable and should be allowed.

Though dependent claims 4 and 5 contain their own allowable subject matter, these claims should at least be allowable due

to their dependence from allowable claim 1. However, to expedite prosecution at this time, no further comment will be made.

Claim 11 has been amended to clarify applicants' claimed invention, not for purposes of narrowing or limiting the claim. The examiner stated that Houf et al. is capable of being employed in an aircraft. Claim 11 claims that the flange extends from the connection section which is sized and shaped to be attached to an exterior side of an aircraft. This is not disclosed or suggested in Houf et al. Houf et al. certainly does not "anticipate" the features of claim 11. The examiner's belief that it could be used for such a purpose only comes after reading applicants' patent application. Claim 11 also claims:

"a housing having the electronic circuitry located in the housing, the housing comprising a first wall member with a heat sink section that extends in an outward direction at an outer side of the first wall member, and a connection section located at an inner side of the first wall member, wherein other walls of the housing are attached to the connection section to form an enclosure housing the electronic circuitry, ..."

In Houf et al., the heat sink 16 is not part of the housing of the control logic module 12 having the electronic circuitry. In fact, the heat sink 16 is separated from the control logic module 12 by the power switching assembly 14. There does not appear to be a disclosure or suggestion in Houf et al. of other walls attached to the heat sink 16 to form an enclosure

housing the electronic circuitry. The features of claim 11 are not disclosed or suggested in the cited art. Therefore, claim 11 is patentable and should be allowed.

Though dependent claims 12-16 and 18-19 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 11. However, to expedite prosecution at this time, no further comment will be made.

Claim 20 has not been amended. The examiner stated that the inner skin/backplane member 44 in Connolly et al. is deemed to constitute a heat sink (referring to column 5, lines 28-32). However, column 4, lines 45-60 and column 5, lines 28-32 of Connolly et al. appear to indicate that inner skin/backplane member 44 is constructed with materials to function as an **thermal insulator**; not a heat sink. The design "protects the primary load carrying composite plies from high transient temperatures" (column 4, lines 54-56).

Claim 20 claims an electronic communications device with a printed circuit board and a housing. The housing has a first side section which **both**:

- closes an access opening through the airfoil;  
and
- forms a wall of an enclosure for the printed circuit board.

There is no disclosure or suggestion of a printed circuit board in Connolly et al. Connolly et al. gives examples of the components/modules 50 at column 5, lines 5-8, including RF

transmission lines, optical fibers, dedicated RF processor modules and the like, but there is no disclosure or suggestion of a printed circuit board. There is no disclosure or suggestion that any part of the assembly 30 in Connolly et al. forms a housing with a first side section connected at an exterior side of the airfoil which forms a wall of an enclosure for a printed circuit board. The features of claim 20 are not "anticipated" by Connolly et al. Nor are the features of claim 20 suggested by Connolly et al. Therefore, claim 20 is patentable over the art of record.

Though dependent claims 21-25 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 20. However, to expedite prosecution at this time, no further comment will be made.

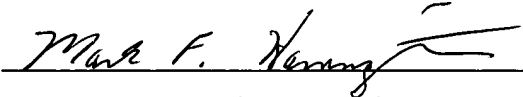
Claim 26 has been amended, but merely to clarify applicants' claimed invention; not for reasons related to patentability. Connolly et al. does not disclose or suggest a heat sink; much less a heat sink located in an access aperture of an aircraft. Column 4, lines 45-60 and column 5, lines 28-32 of Connolly et al. appear to indicate that inner skin/backplane member 44 is constructed with materials to function as an **thermal insulator**; not a heat sink. The design "protects the primary load carrying composite plies from high transient temperatures" (column 4, lines 54-56). Connolly et al. certainly does not "anticipate" the features recited in claim 26. The suggestion to put a heat sink of an electronic device housing inside an access aperture of an aircraft so it is located at the exterior of the aircraft only comes after

reading applicants' patent application. Connolly et al. does not disclose or suggest attaching a side, having a heat sink, of a housing of an electronic device to the aircraft to close an access aperture, wherein the heat sink is located in the access aperture. Claim 26 is patentable and should be allowed.

Claim 27 has been added above to claim the features recited therein.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issue remain, the examiner is invited to call applicants' attorney at the telephone number indicated below.

Respectfully submitted,

  
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9/2/04  
Date

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**Amendments to the Drawings:**

The attached sheets of drawings includes changes to Fig. 6.

Reference number "76" has been added to Fig. 6.

Attachment: Replacement Sheets